AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) ~~A manufacturing mold having a portion thereof including a manifold containing one or more sprues or runners, the manifold being~~ Plastic mold tooling formed of a hot rolled boron-free steel alloy plate which has been manufactured by hot rolling, hot leveling after the hot rolling, air cooling after the hot leveling until complete transformation of the microstructure occurs, and tempering after the air cooling to lower hardness of the plate to about 277 to about 311 BHN, the steel alloy comprising: ~~about 0.16 percent to about 0.2 percent by weight carbon;~~ about 0.6 percent to about 0.9 percent by weight manganese; a maximum of 0.02 percent by weight phosphorous; ~~a maximum of 0.02 percent by weight sulfur;~~ from about 0.25 percent to about 0.45 percent by weight silicon; ~~from about 2.3 percent to about 2.7 percent by weight chromium;~~ a maximum of 0.2 percent by weight nickel; a maximum of 0.15 percent by weight copper; ~~a maximum of 0.1 percent by weight molybdenum;~~ from about 0.015 percent to about 0.03 percent by weight aluminum~~; and the balance being iron with trace amounts of ordinarily present elements~~ .

2. (Currently Amended) The plastic mold tooling ~~manifold~~ of claim 1 wherein the alloy has a hardness within the range of from about 290 ~~277~~ to about 300 ~~311~~ BHN and the plastic mold tooling comprising a mold base.

3. (Currently Amended) A hot rolled and tempered plastic mold tool of a boron-free ~~A~~ tool steel alloy, the alloy being comprised of from about ~~0.16 percent to about 0.2 percent by weight carbon, from about~~ 0.6 percent to about 0.9 percent by weight manganese, a maximum of 0.02 percent by weight phosphorous, ~~a maximum of 0.02 percent by weight sulfur,~~ from about 0.25 percent to about 0.45 percent by weight silicon, ~~from about 2.3 percent to about 2.7 percent by weight chromium,~~ a maximum of 0.2 percent by weight nickel, a maximum of 0.15 percent by weight copper, ~~a maximum of 0.1 percent by weight molybdenum,~~ from about 0.015 percent to about 0.03 percent by weight aluminum and ~~the balance being iron with residual impurities~~ wherein the alloy has a hardness within the range of from about 277 to about 311 BHN.

4. (Currently Amended) The plastic mold tool ~~steel alloy~~ of claim 3 wherein the steel alloy includes carbon ~~is~~ in a range of from about 0.17 to about 0.19 percent by weight.

5. (Currently Amended) The plastic mold tool ~~steel alloy~~ of claim 4 wherein the carbon is about 0.18 percent by weight.

6. (Currently Amended) The plastic mold tool ~~steel alloy~~ of claim 3 wherein the manganese is in a range of from about 0.7 to about 0.8 percent by weight.

7. (Currently Amended) The plastic mold tool ~~steel alloy~~ of claim 6 wherein the manganese is about 0.75 percent by weight.

8. (Currently Amended) The plastic mold tool ~~steel alloy~~ of claim 3 wherein the silicon is in a range of from about 0.3 to about 0.4 percent by weight.

9. (Currently Amended) The plastic mold tool ~~steel alloy~~ of claim 8 wherein the silicon is about 0.35 percent by weight.

10. (Currently Amended) The plastic mold tool ~~steel alloy~~ of claim 3 wherein the alloy includes chromium ~~is~~ in a range of from about 2.4 to about 2.6 percent by weight.

11. (Currently Amended) The plastic mold tool ~~steel alloy~~ of claim 10 wherein the chromium is about 2.5 percent by weight.

12. (Currently Amended) The plastic mold tool ~~steel alloy~~ of claim 3 wherein the plastic mold tool is a mold base ~~aluminum is about 0.02 percent by weight~~.

13. (Currently Amended) A hot rolled and tempered plastic mold tool of a boron-free ~~A~~ tool steel alloy, the alloy consisting essentially of from about ~~0.16 percent to about 0.2 percent by weight carbon, from about~~ 0.6 percent to about 0.9 percent by weight manganese, a maximum of 0.02 percent by weight phosphorous,

~~a maximum of 0.02 percent by weight sulfur,~~ from about 0.25 percent to about 0.45 percent by weight silicon, ~~from about 2.3 percent to about 2.7 percent by weight chromium,~~ a maximum of 0.2 percent by weight nickel, a maximum of 0.15 percent by weight copper, ~~a maximum of 0.1 percent by weight molybdenum,~~ from about 0.015 percent to about 0.03 percent by weight aluminum and ~~the balance being iron with residual impurities~~ wherein the alloy has a hardness within the range of from about 277 to about 311 BHN.

14. (Currently Amended) The plastic mold tool ~~steel alloy~~ of claim 13 wherein the steel alloy includes carbon ~~is~~ in a range of from about 0.17 to about 0.18 percent by weight.

15. (Currently Amended) The plastic mold tool ~~steel alloy~~ of claim 13 wherein the manganese is in a range of from about 0.7 to about 0.8 percent by weight.

16. (Currently Amended) The plastic mold tool ~~steel alloy~~ of claim 13 wherein the silicon is in a range of from about 0.3 to about 0.4 percent by weight.

17. (Currently Amended) The plastic mold tool ~~steel alloy~~ of claim 13 wherein the alloy includes chromium ~~is~~ in a range of from about 2.4 to about 2.6 percent by weight.

18. (Currently Amended) The plastic mold tool ~~steel alloy~~ of claim 13

wherein the plastic mold tool is a mold base ~~aluminum is about 0.02 percent by weight~~.

19. (Currently Amended) A process for manufacturing a hot rolled and tempered plastic mold tool from ~~the~~ a boron-free tool steel alloy ~~having the composition claimed in claim 1~~, the process comprising the steps of: ~~a) preparing a material charge; b) melting the material charge in an electric furnace; and c) ladle refining the melted material to remove impurities and homogenize the melted material; d) removing gases from the melted material by vacuum degassing. e) pouring the melted material into ingot molds using an argon shield; f)~~ shaping the ~~material~~ tool steel alloy by hot rolling ~~or forging~~ into a ~~desired shape of the tool~~ hot rolled plate using a hot rolling mill; ~~g)~~ hot leveling the ~~steel after rolling~~ hot rolled plate while the hot rolled plate is still on the hot rolling mill; ~~h)~~ cooling the hot leveled plate ~~steel~~ by free air cooling to a temperature below about 600 ° F.; ~~and i)~~ tempering the ~~tool~~ air cooled plate to a ~~harness~~ hardness in the range of from about 277 to about 311 BHN and forming the tempered air cooled plate into plastic mold tooling.

20. (Currently Amended) The ~~A~~ process of claim 19, comprising ~~for manufacturing a tool from the alloy having the composition claimed in claim 13, the process comprising the steps of: a)~~ preparing a material charge; ~~b)~~ melting the material charge in an electric furnace; ~~and c)~~ ladle refining the melted material to remove impurities and homogenize the melted material; ~~d)~~ removing gases from the melted material by vacuum degassing, ~~e)~~ argon shield pouring the melted material into a mold and shaping the cast tool steel alloy in ~~onto~~ a rolling mill using an argon

shield; ~~f) shaping the material by rolling into a desired shape of the tool; g),~~ hot leveling the tool steel alloy after rolling; ~~h)~~ cooling the tool steel alloy by free air cooling to a temperature below about 600.degree. F.; and ~~i)~~ tempering the tool steel alloy to a ~~harness~~ hardness in the range of from about 277 to about 311 BHN.

21. (New) The process of claim 19, wherein the tool steel includes about 0.6 to about 0.9 percent by weight manganese, a maximum of 0.02 percent by weight phosphorous, from about 0.25 percent to about 0.45 percent by weight silicon, a maximum of 0.2 percent by weight nickel, a maximum of 0.15 percent by weight copper, and from about 0.015 percent to about 0.03 percent by weight aluminum.

22. (New) The process of claim 19, wherein the air cooled plate has a hardness higher than that desired for the mold tooling and the tempering lowers the hardness to the desired hardness for the mold tooling.

23. (New) The process of claim 19, wherein the tool steel is melted and cast into a mold, cooled and reheated prior to the hot rolling step.

24. (New) The process of claim 19, wherein the tool steel is formed into a mold base.

25. (New) The process of claim 19, wherein the free air cooling comprises cooling the hot leveled plate on a rigid cooling table so as to obtain a flat and wrinkle

free plate which is not moved or lifted until the hot leveled plate is cooled below 600 °F, the hot leveling and free air cooling thereby producing an air cooled plate free of residual bending stresses associated with low temperature leveling and flattening operations.

26. (New) A method of forming plastic injected parts using plastic mold tooling comprising mold bases connected to a manifold wherein one or more parts of the plastic mold tooling comprise the plastic mold tooling of claim 1, the method comprising mating the mold bases to form a mold cavity and injecting molten plastic through the manifold and into the mold cavity.

27. (New) The method of claim 26, further comprising machining the mold cavity in the mold bases.